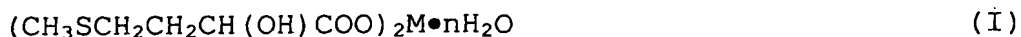


CLAIMS

1. Use of at least a metal chelate chosen among those having the general formula (I):



5 in which: M is a bivalent metal cation chosen from the group comprising: Mg, Ca, Mn, Co, Cu, Zn and F, and n is the number of water molecules; for preparing an integrator for administration in human nutrition.

10 2. Use according to claim 1, in which the integrator is administered to patients suffering from a deficiency of metal oligoelements such as Mg, Ca, Mn, Co, Cu, Zn and Fe.

3. Use according to claim 1, in which said at least one metal chelate is chosen from the group comprising:

15  $(\text{CH}_3\text{SCH}_2\text{CH}_2\text{CH}(\text{OH})\text{COO})_2\text{Zn}\cdot 2\text{H}_2\text{O};$

$(\text{CH}_3\text{SCH}_2\text{CH}_2\text{CH}(\text{OH})\text{COO})_2\text{Cu};$

$(\text{CH}_3\text{SCH}_2\text{CH}_2\text{CH}(\text{OH})\text{COO})_2\text{Co}\cdot 2\text{H}_2\text{O};$

$(\text{CH}_3\text{SCH}_2\text{CH}_2\text{CH}(\text{OH})\text{COO})_2\text{Mn}\cdot 2\text{H}_2\text{O};$

$(\text{CH}_3\text{SCH}_2\text{CH}_2\text{CH}(\text{OH})\text{COO})_2\text{Ca}\cdot 2\text{H}_2\text{O};$

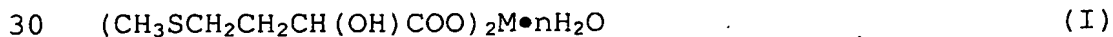
20  $(\text{CH}_3\text{SCH}_2\text{CH}_2\text{CH}(\text{OH})\text{COO})_2\text{Mg}\cdot 2\text{H}_2\text{O};$

$(\text{CH}_3\text{SCH}_2\text{CH}_2\text{CH}(\text{OH})\text{COO})_2\text{Fe}\cdot 2\text{H}_2\text{O}$

for preparing an integrator for administration in human nutrition.

4. Use according to claim 3, in which the integrator is administered to patients suffering from a deficiency of metal oligoelements such as: Mg, Ca, Mn, Co, Cu, Zn and Fe.

5. Use of at least a metal chelate chosen among those having the general formula (I):

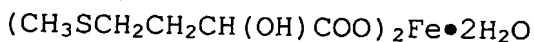
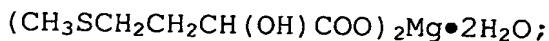
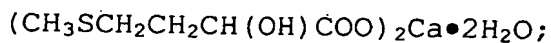
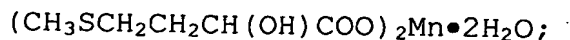
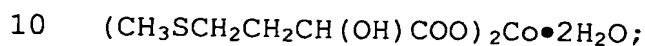
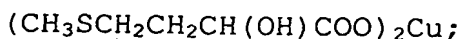
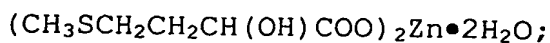


in which: M is a bivalent metal cation chosen from the group comprising: Mg, Ca, Mn, Co, Cu, Zn and F, and n is the number of water molecules; for preparing an integrator for agro-zootechnical nutrition to be

administered to monogastric or polygastric animals.

6. Use according to claim 5, in which the integrator is administered to monogastric or polygastric animals suffering from a deficiency of metal oligoelements such as Mg, Ca, Mn, Co, Cu, Zn and Fe.

7. Use according to claim 5, in which said at least a metal chelate is chosen from the group comprising:



15 for preparing an integrator for agro-zootechnical nutrition to be administered to monogastric and polygastric animals.

8. Use according to claim 7, in which the integrator is administered to monogastric or polygastric animals suffering from a deficiency of metal oligoelements such as Mg, Ca, Mn, Co, Cu, Zn and Fe.

9. Method for preparing a metal chelate  $(\text{CH}_3\text{SCH}_2\text{CH}_2\text{CH}(\text{OH})\text{COO})_2\text{Fe}\cdot 2\text{H}_2\text{O}$  comprising a step in which an alkali metal or alkaline-earth metal salt of methionine hydroxy analogue is reacted with a soluble iron (II) salt in water environment.

10. Method according to claim 9, in which the reaction takes place between sodium salt of methionine hydroxy analogue and ferrous sulfate.

11. Method according to claim 9 or 10, in which iron (II) chelate obtained from the reaction is filtered and washed with water.

12. Method for preparing a metal vanadium chelate comprising a step in which a vanadium (V) oxide or

salt is reacted with a solution of methionine hydroxy analogue.

13. Method according to claim 12, in which vanadium oxide is  $V_2O_5$ .

5 14. Method according to claim 12 or 13, in which the reaction takes place at high temperature and under stirring.

15. Use of metal vanadium chelates prepared according to one of the claims 12 to 14 for preparing an  
10 integrator to be administered in human nutrition.

16. Use of metal vanadium chelates prepared according to one of the claims 12 to 14 for preparing an integrator for agro-zootechnical nutrition to be administered to monogastric or polygastric animals.

15 17. Method for preparing a metal molybdenum chelate comprising a step in which a molybdenum (VI) oxide or salt is reacted with a solution of methionine hydroxy analogue.

18. Method according to claim 17, in which molybdenum  
20 oxide is  $MoO_3$ .

19. Method according to claim 17 or 18, in which the reaction takes place at high temperature and under stirring.

20. Use of metal molybdenum chelates prepared  
25 according to one of the claims 17 to 19 for preparing an integrator to be administered in human nutrition.

21. Use of metal molybdenum chelates prepared according to one of the claims 17 to 19 for preparing an integrator for agro-zootechnical nutrition to be  
30 administered to monogastric or polygastric animals.

22. Stable aqueous solution of iron (III) or chrome (III) complexes with MHA in which the molar ratio MHA/M(III) is  $\geq 2$ .

23. Method for preparing a stable aqueous solution

according to claim 22, comprising a step in which methionine hydroxy analogue MHA is reacted with an aqueous solution of a soluble iron (III) or chrome (III) salt.

- 5 24. Use of a stable solution of iron (III) or chrome (III) complexes according to claim 22 for preparing an integrator for administration in human nutrition.
25. Use of a stable solution of iron (III) or chrome (III) complexes according to claim 22 for preparing an
- 10 integrator in agro-zootechnical nutrition to be administered to monogastric or polygastric animals..